

**ABSTRACT**

Novel peptides with antimicrobial activity are disclosed. The novel peptides are octomeric peptides modified from  $\alpha$ -MSH. The modified  $\alpha$ -MSH antimicrobial peptides disclosed herein may have enhanced activity against microbes over  $\alpha$ -MSH due to modifications in peptide  
5 sequence and chirality of amino acids. Due an identified mechanism of action for antimicrobial activity in which cAMP accumulates in the microbial cell, it may be that microbes will not generate resistance to these modified  $\alpha$ -MSH antimicrobial peptides.